Mad in America
SCIENCE, PSYCHIATRY AND SOCIAL JUSTICE

We Are Amidst the Age of Behavioral Alchemy

How the Reality Approximation Engine allows us to rethink psychology, mental health care, and perhaps even society.

By **David Straub** - August 1, 2024

As the solopreneur of a bootstrapping emotional wellness startup, I regularly reach out to thought leaders in related fields from academia to social media. Most recently, I had a brief interaction with a psychology professor at a prestigious American university whose behavior illuminated the difference between those in the psychology and psychiatry arena versus neuroscientists. I have found the latter to be very open, forthcoming and logical. The former group tends towards what I would refer to as emotional.

My anecdotal explanation is that psychologists and psychiatrists are more concerned with self-preservation and their own ego, despite the latter actually being medical doctors. Regardless, neither seem intent on doing what is best for the field but, rather, what is best for them. Granted, that is a harsh criticism, but one that is potentially borne out by the state of the field, as will be discussed.

Neuroscientists, on the other hand, seem to truly want to advance the field and do what is best for humanity. They are willing to entertain my conjecture and have meaningful conversations where they have both educated me as well as seriously considered the observational and logical statements I present. This is despite my having pretty much no pedigree when it comes to the areas of our discussion—I'm a software engineer—and them often being leaders in the field.

This opening discussion represents two critical elements that will be covered in this article. The first is whether or not psychology as it stands today is actually a science. The second takeaway is more esoteric and goes to the nature of the interactions I have had with neuroscientists. I'm going to introduce to you a new definition of mental health and, in doing so, am going to show that this group is more mentally healthy, for which we should be very concerned.

THE STATE OF PSYCHOLOGY AND MENTAL HEALTHCARE TODAY

I routinely rummage through all the biographies of professors at leading universities. My goal is to see if there is any likelihood that their areas of interest and, accordingly, research focus, either overlap or are otherwise related to what I am putting forth. Other than my occasionally finding some common ground, there is a far more interesting theme that arises.

If you look at what is being done to advance the field of psychology, you will quickly realize that most of academia is focused on a very narrow area. For example:

- Cognitive mechanisms underlying language comprehension
- Etiology and maintenance of bulimia nervosa
- Structural equation models, longitudinal methods, and latent curve models.
- Behavioral neurophysiology of brain reward processing
- Individual differences in cognitive development as they relate to nutrition and nutrigenomics

Now, granted, these are all important things to study, but they are definitely on the niche side of the spectrum.

To some extent, it is akin to what you see in physics or chemistry, with a glaring difference. Physics has its $E=mc^2$ and standard model. Chemistry has its concept of molecules and the periodic table. Psychology, on the other hand, has no theoretical foundation driving a description of behavior.

Instead, you have these very philosophical explanations. For instance, in terms of understanding personality, you have Jung's theory of personality which eventually grew into the Myers-Briggs type indicator, The Big Five, Enneagrams, Goleman's four quadrants of Emotional Intelligence, DiSC and the Four Color Personalities. These mutually exclusive explanations can't all be right,

As another example, The Contextual Model talks about three critical elements that must be present in therapy in order for it to be effective. They are, in no particular order:

1. A goal
2. Rapport (between patient and practitioner)
3. Some evidence-based approach

How is it that any evidenced-based approach is equally successful? I mean there must be some variation between them. At least some must be better than others, right? But nothing rises to the top, which seems very suspicious. Why is this?

We are amidst the age of behavioral alchemy.

Maybe what practitioners are really doing is offering a rational conversation along with emotionally healthy support; at least that is the hope when they get it right. There are plenty of examples of them getting it wrong; not being able to handle certain subject matter, if not being downright judgemental or even harmful in their response. Nonetheless, let's assume that, as a whole, they allow people to talk through stuff, and maybe that is the key.

If you think about emotions from a basic level, you should ask "why did we evolve them?" And that answer should be in line with everything else we have learned about natural selection: that emotions provide some basic advantage that increases our ability to survive. And to understand that, all you need to do is think about what they do.

Emotions provide us with pleasure and pain. Now while that can be a solitary process, it is most often driven via the consideration of another. Meaning, we feel good and bad based upon what is going on with someone else or, perhaps, what we believe that person is thinking. In other words, emotions are this vicarious experience that connect us to others.

The evolutionary picture of emotions should now be coming into focus. Entities on this planet are inherently selfish. That's how life works. They want to survive. But, what you see happening is that creatures with more advanced emotions form groups that work together. And therein lies the real advantage. Collaboration.

Returning to our therapist session, we can now see that these two people are doing something that is very natural. After all, if emotions enable collaboration, shouldn't we work through them together? However, this flies in the face of what I will call one of the most hideous of all cultural beliefs. When you have emotional issues—and, in reality, we will show later that all behavioral problems, action and inaction alike, are rooted in problems with how we process what we feel—you are supposed to go "fix yourself".

It should only be natural that we work through emotional issues with others. What we do today is like asking a soccer player to go get better on their own and return to the team when they are improved. The truth is you can't pass the ball and work it up the field unless you have others to pass it to and an opposing team working against that. Meaning, you can only get really good at soccer by playing soccer.

The sad part is, as far as therapy is concerned, it gets much worse. There are a dozen reasons which

we will discuss shortly as to why the fundamental approach is flawed. This, of course, goes to criticize academia's thinking in general. If we don't have that theoretical base tying everything together—and, more importantly, a uniform method of measuring the proper output (i.e. personality tests)—why are we stuck in the minutiae of studying even smaller niches if there is no foundation? Why aren't colleges questioning the big picture? Instead, psychology seems like a field built upon a house of cards.

Let's look at the definition of mental health per the American Psychological Association:

"Mental health is a state of mind characterized by emotional well-being, good behavioral adjustment, relative freedom from anxiety and disabling symptoms, and a capacity to establish constructive relationships and cope with the ordinary demands and stresses of life."

It is a very ambiguous description that more or less guarantees discrepancy from practitioner to practitioner. It is subjective and unmeasurable, much like the DSM. Further, when you consider the patient's perspective, the user experience as we like to call it these days, the result must be abysmal—disagreement between therapists—which is a good segue into therapy's shortcomings. Don't worry. There is a solution offered later on, so now to the critique. Here are the dirty dozen.

1. No guarantee in outcome

When you start a session with a practitioner, there is zero commitment to improvement.

2. No outcome specified.

In fact, what the result should be is completely improvised.

3. Done in private

Why? Should we be ashamed?

4. Done without overview.

How do we even know if the practitioner is adhering to anything evidenced-based?

5. Rapport is a maybe

The typical patient goes through 3 therapists before they find one with which they "gel".

6. Indefinite term.

How long are you in for? Who knows. Could be months. Could be years.

7. Different approaches.

Each therapist has the latitude of picking how they believe treatment should progress. Autism alone lists 28 acceptable evidenced-based-processes (EBPs) and 10 manualized interventions.

8. More art than science.

EBP's are almost always chosen by the practitioner, likely due to their familiarity versus some logical filtering process. Further, there is nothing to say that the implementation will be anything like what was done in a particular study under optimal (and reviewed!) circumstances.

9. Expensive and not always accessible.

Even if you are lucky enough to have therapy covered or afford it on your own, there is no certainty anyone will be available, either in the near future or ever due to location or just scheduling

10. Stigma.

While talking about therapy has become more acceptable, when people think they have no issues you will often insult them if you would suggest they could use some help.

11. We are paying a stranger…

Why can't our inner circle help us?

12. For an hour a week.

Shouldn't mental health support be a 24/7 operation to be a truly effective process?

So, what do we do about all this ambiguity? Well, the answer lies in some of what we have already discussed. Offering an alternative to the therapy dogma. Something that includes the natural order of where emotions enabled us to thrive (in small groups). Finally, we tie in what was covered in this article's predecessor from way back in early 2021 and a concept that we now refer to as the Reality Approximation Engine, or RAE.

A NEW PARADIGM

There is a reasonable chance that the education of practitioners is less about learning some evidence-based process and more about their becoming less biased. If all the EPB's are equally successful, then they may very well be irrelevant. It is likely more about being able to talk through what is going on in your head in a non-judgmental environment with a person who is going to be logical in their response.

Shouldn't all our interactions be emotionally healthy?

More to the point, shouldn't there be some definition of what is emotionally healthy, and shouldn't we be taught this starting in elementary school? Granted, the idea of national standards is a hot-button issue, but that may be more indicative of the matter at hand. Meaning, if most people are not good at being emotionally healthy and the concept of being emotionally unhealthy is still stigmatized, then we should expect push back on any scrutiny around the subject. Regardless, that should not impede the motivation to come up with a universal system.

Further, shouldn't any universal system be designed from the get-go to be shared? Think about it. We evolved emotions hundreds of thousands of years ago. And, for most of that time, we existed in small groups where emotions enabled us to thrive so well that we eventually became the dominant species on the planet. So, what has changed? After civilization came along and we transitioned from hunter-gatherers to agricultural-based beings, what was different? The answer lies in the fundamental nature of any tribe, band or clan; self-sufficiency.

Today, we are very much focused on the individual, often to the disadvantage of the group. There is no vested interest in others and behavior is not homogenized. We "get away with" some pretty selfish and aberrant behavior. At the same time, psychology does not put forth what is emotionally healthy—perhaps because they don't know how to define it or just because the resistance of trying to do so would be so great—and we are left to make it up on our own as parents, from scratch, then try to actually instill that in our offspring. It seems like an impossible task—developing a standard and a way to achieve it—but there is hope. And it comes from a very unlikely source. Economics.

GAME THEORY

If Psychology has its root in looking at what is unhealthy and irrational, economics started at the other end of the spectrum. What would a rational person do? And they came up with answers and eventually a system called game theory. The applications are many but, at the core, it is a "study of mathematical models of strategic interactions". In other words, it is "the science of rational decision making in humans" which, of course, implies the problem. We are not so rational at times. Nonetheless, if we are going to come up with a universal standard of behavior, it can work as the goal we can work towards when it comes to defining emotionally healthy behavior.

Now, if you have seen "A Beautiful Mind" you have been introduced to game theory. More importantly, you are familiar with one of the most popular axioms supported by its math. Specifically, the Nash Equilibrium, so named because of the person who came up with and eventually proved the concept. It states:

"In order to optimize the output of the group, one must do what is best for oneself AND ALSO what is best for the group."

Right away, you can see how this concept made our ancestors successful. It inherently supports the two group traits that have been lost in the modern world. Our having a vested interest in the success of another, and our being trained to do everything possible to ensure that principle was followed. In other words, it defines and proves that good social behavior is what is best for everyone.

An even larger benefit of this axiom is that it works in capitalism, potentially the one area that seems to thwart its implementation. Whether it is the output of a department, company, community or country as a whole, the rule still works. When someone else fails, the overall metric by which the group's success is measured takes a hit. That means we should not laud self-interest but, rather, after we take care of our self-interest, we should ensure that everyone else is not troubled in their pursuit. And, if so, we should help them. We should not hoard the mammoth all to ourselves because, in the end, if we all follow this new paradigm, if we should ever need assistance in the future, others will ensure we survive. Granted, trust is needed, but isn't that the point? Trusting each other and working together?

So we are starting to have the basis of a universal behavior system. The goal should be maximizing collaboration; having a vested interest in the success of everyone in our band. And the way that is enacted is ensuring—from the very earliest of ages—that we know how to enable this emotionally healthy behavior, which brings us to one final point. How does this all gets done.

Reality Approximation Engine

Rather than asking what is the meaning of life or what consciousness is, we are going to look at something more germane. What is the purpose of awareness?

If you take in everything we have talked about above, that emotions enable cooperation and that, when properly learning, those feelings work to optimize the group's output, you may start to realize that we need a vehicle to make this all happen. Meaning, in order to collaborate, we need to be able to work together and decide on a plan of action. And when you look at planning, you can see it has two inherent components; an assessment of what is and, accordingly, what to do about that as a result.

So you can imagine a time before we had consciousness—the ability to be aware of the moment and make sense of it by thinking of our past—that emotions alone would have provided an advantage. And even if they weren't the sophisticated version of feelings we have today—the concept that our subconscious makes us feel things based upon our conditioned experiences—they would, in the moment, provide a camaraderie and unity that would improve survival. But we have evolved past that point.

Evolving consciousness—and the subsequent language that allows us to compare our perspective with someone else—does two very powerful things. First, it allows us to communicate how we assess the present, and I say assess because, ultimately, that's what we are doing. Neuroscientists may call it hallucinating but, in the end, we come up with a complete picture of all that is going on at the moment, immediately removing anything superficial, then prioritizing the rest into a kind of "things we should consider" checklist, all thanks to emotions by the way.

Beyond perceiving the present, the second advantage consciousness provides is even bigger. And that is the concept of reorganizing or reclassifying that past. Meaning, we each have different experiences —so one may know something that another does not—and, at times, different interpretations, some of them being downright wrong. Phobias are a great example. Whereas one person might become alarmed over a certain stimulus, another person may not see it as a big deal. They both can't be right. Meaning, whatever it is has some risk level associated with it or doesn't. Either that little dog is not very terrifying or it is dangerous; either those purple looking storm clouds off in the distance are a problem or not.

Awareness allows us to correct what we feel. Invariably, some of those emotions may be misleading and we need to invalidate them. That can include us feeling good when we shouldn't. Nonetheless, every second of every day we experience physical sensations that offer a clue as to what is going on in reality. And the fact that we can (and should!) talk about what those perceptions are with another offers a very powerful optimization scheme. Meaning, we can improve the accuracy of our reality by using higher-level reasoning in comparing what we feel and think with someone else.

The final realization should be that this whole RAE comparison system enables us to homogenize behavior. While that naturally happened within a small tribe for our ancestors, we need to intentionally engage in the process today. We shouldn't trust our gut but, rather, verify it. Not only via our own critical thinking process, but in discussions with others as well—not alone in therapy with a stranger.

This brings us to our new definition of mental health:

"The accuracy with which our mind perceives and forecasts reality and enacts our resulting decisions".

I called the behavior of psychologists and psychiatrists "emotional" because they are not willing to take into account that what they are doing is deeply flawed. Granted, a six-figure salary and decade investment in education might be hard to justify if it is more akin to philosophy but, nonetheless, it is imperfect. As Thomas Insel famously quipped, "whatever we've been doing for five decades, it ain't working". The numbers measuring undesirable behavior are all getting worse, including the fact that 2023 was the worst year on record for those dying by suicide in America. It was more than 50,000.

These trends—including the mental health crisis the pandemic has unleashed—all point to a profession that is deficient in what it is doing. If you are a member, we understand that you are doing the best you can with what you have been given, and are even using science whenever possible. However, the fundamental concept that psychology is science is just not true, and any attempt to justify so really only goes to show that one is, in fact, emotionally misaligned, with a perception of reality that could use more accuracy. After all, that is what emotionally healthy is all about. Recognizing that our gut can be in error and, when it is, will drive undesirable behavior because what we feel reality is and what it really is are in conflict.

The end result is that, if we take into account all above, we have a new approach to improving behavior.

1. A measurable definition of mental health.
2. Guidelines for how we can achieve it;
3. A universal definition of desirable behavior.
4. The goal of maximizing collaboration.
5. A focus on valuing our reality and that of all others.
6. A way to determine which is more accurate whenever disagreement arises.
7. All done in an open group setting.

EPILOGUE

We cannot, of course, claim that we have the solution or—since it has yet to be officially validated—a solution, although Emotional Alignment certainly checks all the boxes above and more. What we can say for sure is this. The current approach is flawed at best and broken at worst. All the evidence points to that, notwithstanding all the practitioners, academics, policy makers and businesses profiting from behavioral alchemy. What we can say is this.

There definitely needs to be a theoretical, provable Model of behavior. One that math can substantiate.

The Model must include development, remediation and quantification (a way to measure success).

The Model must be boiled down into a language that anyone can understand, especially parents and early development caregivers who must foster emotionally healthy children.

And, finally, and most importantly, the system has to be free, or at least some version of it must be so, although the concept of freemium is problematic. Nonetheless, regardless of economic strata or any other demographics for that matter, the Model must be accessible, culturally agnostic and integrated into the social dialogue so we can dispense with the many beliefs that undermine the health of a society overall. Prisons, mental institutions, homeless encampments and suicide are all examples of a community that is not working well. A society that lets children fend for themselves, enabling the development of maladaptive strategies to survive when their home fails to instill socially acceptable behavior and their primary education system is unable to fill the void

We can do better, and that is my hope. To enable that dialog and, eventually, the outcome, when it comes to improving the behavioral health of all. Every single last one of us.

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